

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/FR2004/002550

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 F15B21/04 F16K21/02

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F15B F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 32 05 411 A (DANFOSS AS) 25 August 1983 (1983-08-25) page 8, paragraph 3; figure 2	1-3,5
X	FR 1 562 715 A (CATERPILLAR TRACTOR CO.) 4 April 1969 (1969-04-04) page 24, paragraph 2; figure 13	1-4
X	EP 0 056 230 A (HITACHI CONSTRUCTION MACHINERY) 21 July 1982 (1982-07-21) page 8, line 7 - page 8, line 14; figure 1	1

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- °A° document defining the general state of the art which is not considered to be of particular relevance
- °E° earlier document but published on or after the international filing date
- °L° document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- °O° document referring to an oral disclosure, use, exhibition or other means
- °P° document published prior to the international filing date but later than the priority date claimed

°T° later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

°X° document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

°Y° document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

°&° document member of the same patent family

Date of the actual completion of the international search

24 January 2005

Date of mailing of the international search report

10/02/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patenttaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Toffolo, O

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No

PCT/FR2004/002550

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
DE 3205411	A	25-08-1983	DE DK	3205411 A1 41383 A ,B,		25-08-1983 17-08-1983
FR 1562715	A	04-04-1969	BE CH DE DE DE ES GB GB GB JP JP JP US US US	715211 A 472607 A 1725040 B1 1725041 B1 1750554 A1 353915 A1 1237561 A 1237562 A 1237563 A 1237564 A 49035657 B 51011269 B 51011270 B 3477225 A 3526245 A 3526288 A 3528243 A		18-11-1968 15-05-1969 19-06-1980 21-02-1980 25-02-1971 01-02-1970 30-06-1971 30-06-1971 30-06-1971 25-09-1974 09-04-1976 09-04-1976 11-11-1969 01-09-1970 01-09-1970 15-09-1970
EP 0056230	A	21-07-1982	JP JP JP DE EP KR US	1425727 C 57116913 A 62033442 B 3272226 D1 0056230 A1 8501255 B1 4520626 A		15-02-1988 21-07-1982 21-07-1987 04-09-1986 21-07-1982 26-08-1985 04-06-1985